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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,275	11/17/2003	Isamu Kobori	07977-024004	1472
26171	7590	04/21/2006	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ROSE, KIESHA L	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,275

Applicant(s)

KOBORI ET AL.

Examiner

Kiesha L. Rose

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 34-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 34-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/21/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the RCE filed 21 February 2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16,17,20,26-29,32,34,35,37,42,43 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyawaki (U.S. Patent 5,717,473).

In re claims 16,26,34 and 42, Miyawaki discloses a liquid crystal display (Figs. 8a-8j) that contains a semiconductor layer (3001), a p-type impurity region (1610) provided in semiconductor layer, a first interlayer insulating film (1611) comprising silicon nitride (Column 11, lines 17-18) provided over semiconductor layer, a conductive layer (1613/1614) comprising titanium (1614) and aluminum (1613) over first interlayer insulating film and a second interlayer insulating film (1616) provided over conductive layer to provide a leveled upper surface over semiconductor layer wherein titanium and aluminum are formed in a multi-layer film (Column 11, lines 19-23) and the conductive layer is connected with the p-type impurity region (claims 34/42).

Art Unit: 2822

In re claims 17,29,35 and 43, the active matrix circuit is incorporated into a liquid crystal display. (Abstract)

In re claims 20,32,37 and 45, the semiconductor layer comprises a crystal silicon. (Column 3, lines 62-64)

In re claims 27-28, the conductive layer comprises an electrode and wiring. (Column 11, line 19) Since the wiring is used as a source/drain electrode it does comprises an electrode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-25,38,39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (U.S. Patent 6,198,133) in view of Miyawaki.

In re claims 21 and 38, Yamazaki discloses an active matrix device (Figs. 5a-5g) that contains a semiconductor layer (504), a p-type impurity region (514) provided in semiconductor layer, a first interlayer insulating film (516) comprising silicon nitride layer and a silicon oxide layer (Column 5, lines 63-67) provided over semiconductor layer, a conductive layer (524) comprising titanium and aluminum (Column 8, lines 28-30) over first interlayer insulating film and a second interlayer insulating film (528) provided over conductive layer to provide a leveled upper surface over semiconductor layer wherein

Art Unit: 2822

titanium and aluminum are formed in a multi-layer film and the conductive layer is connected with the p-type impurity region (claim 38). Yamazaki discloses all the limitations except for the second interlayer insulating film to have a leveled upper surface. Whereas Miyawaki discloses a liquid crystal display (Fig. 8a-8j) that contains a second interlayer insulating film (1616) provided over conductive layers (1613/1614) with a leveled upper surface. The second interlayer insulating film has a leveled upper surface to allow for other layers to be formed thereon, such as other interlayer insulating layers and electrodes. (Fig. 8j)(Column 6, lines 34-37 and Column 11, lines 28-31) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Yamazaki by incorporating the second interlayer insulating layer to have a leveled upper surface to allow for the formation of other layers, such as other interlayer insulating layers and electrodes as taught by Miyawaki.

In re claims 22-24 and 39-40, Yamazaki discloses the active matrix circuit is incorporated into a liquid-crystal display, an image sensor or a liquid-crystal electro-optical device. (Title and Abstract and Column 1, lines 62-67)

In re claims 25 and 41, Yamazaki discloses the semiconductor layer comprises a crystal silicon. (Column 4, line 58)

Claims 18-19,30-31,36 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyawaki as applied to claims 16,26,34 and 42 above, and further in view of Yamazaki.

Art Unit: 2822

In re claims 18-19,30-31,36 and 44, Miyawaki discloses all the limitations except for the active matrix circuit to be incorporated into an image sensor and a liquid crystal electro-optical device. Whereas Yamazaki discloses an active matrix circuit that can be incorporated into an image sensor and an electro-optical device. The active matrix circuit is used in image sensors and electro-optical devices to form non-light emitting type displays used in electric devices. (Abstract, Title and Column 1, lines 12-16 and lines 62-67) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Miyawaki by incorporating the active matrix circuit to be incorporated into an image sensor and an electro-optical device to form non-light emitting type displays used in electric devices as taught by Yamazaki.

Response to Arguments

Applicant's arguments with respect to claims 1-32 and 34-45 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiesha L. Rose whose telephone number is 571-272-1844. The examiner can normally be reached on T-F 8:30-6:00 off Mondays.

Art Unit: 2822

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KLR
11 April 06